

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1.-24.

Claim 25. (New) A magnetic field adjusting device for mounting on a pole plate mounted on a magnetic field generating source, the magnetic field adjusting device comprising a plurality of moveable shimming plugs, each mounted in a retaining groove, whereby each shimming plug can only move in the direction of the retaining groove, characterized in that each shimming plug is driven by means of a drive screw to adjust its position, thereby to effect magnetic field adjustment.

Claim 26. (New) The magnetic field adjusting device according to claim 25, wherein said retaining grooves are swallow-tailed grooves, and said shimming plugs have a trapezoidal section, for engaging with and sliding in the swallow-tailed retaining grooves.

Claim 27. (New) The magnetic field adjusting device according to claim 25, wherein said retaining grooves are T-shaped grooves, and said shimming plugs have a T-shaped section, for engaging with and sliding in the T-shaped retaining grooves.

Claim 28. (New) The magnetic field adjusting device according to claim 25, wherein said shimming plugs are dismountable for replacement with shimming plugs of different size or different magnetic properties.

Claim 29. (New) The magnetic field adjusting device according to claim 25, wherein, in use, the shimming plugs are mounted at the periphery of a pole plate and each retaining groove is oriented in a substantially radial direction of said pole plate.

Claim 30. (New) An assembly comprising a pole plate and a magnetic field adjusting device according to claim 25, wherein the periphery of the pole plate is mounted with a ring-shaped part, and said retaining grooves are formed in the ring-shaped part.

Claim 31. (New) The assembly according to claim 30, wherein there are twelve retaining grooves evenly distributed around the ring-shaped part.

Claim 32. (New) A magnetic field generating source provided with a magnetic field adjusting device, characterized in that the magnetic field adjusting device comprises adjusting bars of a soft magnetic material mounted at the periphery of the magnetic field generating source, the adjusting bars being moveable in a direction substantially parallel to a magnetic field produced by the magnetic field generating source, the resulting magnetic field being adjusted by the position of the bars.

Claim 33. (New) A magnetic field generating source according to claim 32, further provided with a pole plate mounted on the magnetic field generating source, wherein the adjusting bars are moveable in a direction perpendicular to the pole plate.

Claim 34. (New) A magnetic field generating source according to claim 32, wherein said adjusting bars are mounted movably in retaining means.

Claim 35. (New) A magnetic field generating source according to claim 34, wherein said retaining means are arranged at the periphery of the magnetic field generating source.

Claim 36. (New) A magnetic field generating source according to claim 34, wherein said retaining means are arranged at the periphery of the pole plate.

Claim 37. (New) A magnetic field generating source according to claim 32, wherein said adjusting bars have a rack structure, and are arranged to be driven by means of mating pinion gears.

Claim 38. (New) A magnetic field generating source according to claim 32, wherein said adjusting bars are in the form of screws, which can be driven through an internal thread formed in the retaining means.

Claim 39. (New) The magnetic field adjusting device according to claim 32, wherein said adjusting bars are dismountable for replacement with adjusting bars of different size or different magnetic properties.

Claim 40. (New) The magnetic field adjusting device or magnetic field generating source of claim 25, wherein the shimming plugs or adjusting bars are arranged for adjustment in a synchronized manner.

Claim 41. (New) The magnetic field adjusting device or magnetic field generating source of claim 25, wherein the shimming plugs or adjusting bars are arranged for remote adjustment by one or more electric motor.

Claim 42. (New) The magnetic field adjusting device or magnetic field generating source of claim 41, further comprising a computer programmed with magnetic field measurement and/or modeling software, the computer being arranged to control the electric motors to adjust the shimming plugs or adjusting bars in accordance with instructions provided in response to magnetic field measurement or modeling.

Claim 43. (New) The magnetic field adjusting device or magnetic field generating source according to claim 42, wherein the computer is arranged to control the electric motors to automatically adjust the shimming plugs or adjusting bars to achieve a desired level of field homogeneity.

Claim 44. (New) A magnetic field generation device comprising a pair of opposing magnetic field generating sources according to claim 32, arranged to provide a magnetic field generated between them.

Claim 45. (New) A magnetic field generation device comprising a pair of opposing magnetic field generating sources arranged to provide a magnetic field between them; a pair of pole plates, respectively mounted on the opposing faces of the magnetic field generating sources, and at least one magnetic field adjusting device according to claim 25.

Claim 46. (New) A magnetic field generation device comprising a yoke, connected with an upper press plate and a lower press plate, the lower press plate and the upper press plate oppositely arranged; and a magnetic field generating device according to claim 44, with respective magnetic field generating sources and pole plates oppositely mounted on respective said press plates.

Claim 47. (New) MRI apparatus comprising a magnetic field generation device according to claim 45.